

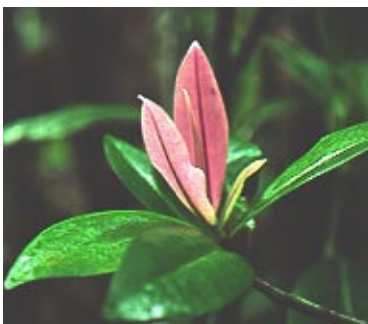
Department of Land and Natural Resources

Sustainability Hotspot

1

IAO AQUIFER

~Island of Maui~



Top to bottom: Iao Valley's famous landmark, stream flowing through Iao Valley, native plants like this *kōlea* can be found in the area.

The valley of Iao is famous for many things, including a pivotal battle in Maui's history and a renown geological feature, the Iao Needle. The stream flowing here and the watershed are all part of the Iao Aquifer System.

This is the major source of groundwater for the Maui Board of Water Supply's Central Maui Water System, which serves Wailuku, Kahului, Puunene, Kihei and other towns in the most populated areas of the "Valley Isle." Land owners, private well owners and the general public all compete for this groundwater.

The Iao Aquifer is actually a body of fresh water floating on a body of heavier salt water. The current sustainable yield of the dike and basal system is 20 million gallons per day, or m-g-d, set by the Commission on Water Resource Management (CWRM) under DLNR. Water analyses reveal that the transition zone between fresh and salt water is rising at a rate of about 10 feet per year under current pumpage conditions. This zone may reach the bottom of existing wells before stabilizing.

Alternate well sources and surface water sources have been specified to satisfy future demand and relieve pressure on Iao Aquifer, but it is not clear how quickly these new sources can be brought on-line.

DLNR's Sustainability Hotspot Team for the Iao Aquifer:

Roy Hardy - Water Commission, Oahu, 587-0274;

Skippy Hau - Aquatic Resources;

Stanley Okamoto - Conservation and Resources Enforcement;

Phil Ohta - Land Division;

Wes Wong - Forestry and Wildlife;

is responsible for the future management of this resource.

DLNR's Vision for the Future and How to Attain It

DLNR'S goal for the future of this resource is to maintain a sustainable pumpage rate from the Iao Aquifer System which is less than 20 mgd with the existing infrastructure. This goal can be accomplished through conservation and development of other water resources. If the County is unsuccessful in protecting the aquifer, it may be necessary for the Commission to designate Iao as a Groundwater Management Area to regulate the resource through water use permits.

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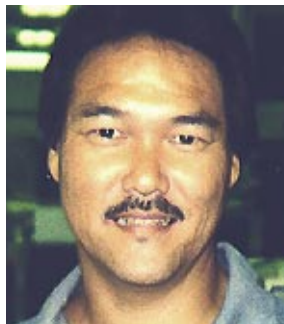
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Top: Iao Valley and trail to lookout. Bottom: Iao Valley in the distance as seen across sugarcane fields.

The success of water conservation efforts and cooperative agreements impacting the Iao Aquifer can serve as a model for other water resource areas such as the watersheds in East Maui and the Upper Waianae Valley on Oahu. 🌿



DLNR's Hotspot Team for Iao Aquifer: (top row, l-r) Hardy, Hau, Okamoto, (bottom row) Ohta, Wong.